

Appl. No. 09/654,253
Amendment dated September 15, 2006 filed with RCE
Response to Office Action of May 15, 2006

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Amendments to the Specification

- a) Please replace the paragraph beginning at page 9, line 2, with the following rewritten paragraph: Note: in line 1 below reference numeral 121 has been substituted for 122

The calculation setup frame 110 further comprises a View Related Plots [[122]] 121 button, or link, that will launch a second graphical displaying a page that contains mismatch measured data, playback plots, and 3D and contour plots of the device mismatch over geometry, such as the 3D plot of Current Mirror mismatch versus geometry in FIG. 7. These plots help guide the user to opportunities for better mismatch, such as the sweet spot 210 shown on the right side of FIG. 7, that may otherwise not be apparent from single point solutions calculated in the mismatch tool 10.

- b) Please replace the paragraph beginning at page 11, line 8, with the following rewritten paragraph: Note: a ")" has been added at the end of the paragraph

In one embodiment, the desired values for each geometry, bias and temperature condition parameter may be entered into the single-value data entry column 126, the string-of-values data entry column 128, and the range-of-value data entry column 138 in any combination of the three columns. If multiple columns contain data entries for the same geometry, bias and temperature condition parameters, the calculation precedence is established from right to left (i.e. the range-of-value data entry column 138 supercedes the string-of-values data entry column 128 which in turn supercedes the single-value data entry column 126).

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- c) Please replace the paragraph beginning at page 23, line 17, with the following rewritten paragraph: Note: in the 3rd line from the bottom after "FIG. 8" a ")" has been added.

Referring to FIG. 8, an interface screen showing the data entry input frame and mismatch results output frame for a resistor mismatch calculation scenario is shown. The interface screen 100, as previously discussed, comprises a calculation setup frame 110, a data input frame 130, a data output frame 150, and a message frame 158. In the resistor calculation scenario in an embodiment of the present invention, the user will select a device type selection 114 designating a resistor (abbreviated "RES" in FIG. 8). Following completion of the selections of the desired technology and the create data entry input form 120 button in the calculation setup frame 110, the data input frame 130 is generated.

- d) Please replace the paragraph beginning at page 24, line 8, with the following rewritten paragraph: Note: a ")" has been added at the end of the paragraph

The data entry input frame 130 comprises length and width selection parameters 132. The specific length and width parameters 132 that are generated following the selection of the create data entry input form 120 button are dependent upon the previous technology and device selections and therefore may vary. As previously discussed, the desired values for the width and length parameters may be entered into the single-value data entry column 126, the string-of-values data entry column 128, and the range-of-value data entry column 138 in any combination of the three columns. And as before, if multiple columns contain data entries for the same width and length parameters, the calculation precedence is established from right to left (i.e. the range-of-value data entry column 138 supercedes the string-of-values data entry column 128 which in turn supercedes the single-value data entry column 126).

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- e) Please replace the paragraph beginning at page 25, line 3, with the following rewritten paragraph: Note: [then] has been replaced with "than" in the 5th line in the paragraph

Below the input columns for width and length, the user can choose to simulate the mismatch pair in a cross-couple configuration by entering appropriate data values into cross-coupled configuration data entry fields 134 that are comprised of fields for Center-to-center and Sigmas(#). It should be noted that the process for computing the mismatch is a little different for the resistor scenario then than that of the transistor scenarios. The primary difference is that a SPICE or MCSPICE type program is not utilized as the calculation is much simpler. Instead, a parameter file is used for the measured data terms.

- f) Please replace the paragraph beginning at page 26, line 17, with the following rewritten paragraph: Note: a ")" has been added in the 6th line of the paragraph after "FIG. 9"

Referring to FIG. 9, an interface screen showing the data entry input frame and mismatch results output frame for a capacitor mismatch calculation scenario is shown. The interface screen 100, as previously discussed, comprises a calculation setup frame 110, a data input frame 130, a data output frame 150, and a message frame 158. In the capacitor calculation scenario embodiment, the user will select a device type selection 114 designating a capacitor (abbreviated "CAP" in FIG. 9). Following completion of the selections of the desired technology and the create data entry input form 120 button in the calculation setup frame 110, the data input frame 130 is generated.

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- g) Please replace the paragraph beginning at page 27, line 7, with the following rewritten paragraph: Note: a ")" has been added at the end of the paragraph

The data entry input frame 130 comprises length and width selection parameters 132. The specific length and width parameters 132 that are generated following the selection of the create data entry input form 120 button are dependent upon the previous technology and device selections and therefore may vary. As previously discussed, the desired values for the width and length parameters may be entered into the single-value data entry column 126, the string-of-values data entry column 128, and the range-of-value data entry column 138 in any combination of the three columns. And as before, if multiple columns contain data entries for the same width and length parameters, the calculation precedence is established from right to left (i.e. the range-of-value data entry column 138 supercedes the string-of-values data entry column 128 which in turn supercedes the single-value data entry column 126).

- h) Please replace the paragraph beginning at page 28, line 1, with the following rewritten paragraph: Note: [then] has been replaced with "than" in the 5th line in the paragraph

Below the input columns for width and length, the user can choose to simulate the mismatch pair in a cross-couple configuration by entering appropriate data values into cross-coupled configuration data entry fields 134 that are comprised of fields for Center-to-center and Sigmas(#). It should be noted that the process for computing the mismatch is a little different for the capacitor scenario ~~than~~ than that of the transistor scenarios. The primary difference is that a SPICE or MCSPICE type program is not utilized as the calculation is much simpler. Instead, a parameter file is used for the measured data terms.